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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/659,106	09/11/2000	Hans Eberle	1004-5041	4516
22120	7590	11/18/2003	EXAMINER	
ZAGORIN O'BRIEN & GRAHAM, L.L.P. 7600B N. CAPITAL OF TEXAS HWY. SUITE 350 AUSTIN, TX 78731			KADING, JOSHUA A	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 11/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/659,106

Applicant(s)

EBERLE ET AL.

Examiner

Joshua Kading

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12, 13, 21, 22, 25 and 26 is/are rejected.
- 7) ☒ Claim(s) 11, 14-20, 23 and 24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other:

DETAILED ACTION

Drawings

Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing
5 correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

10 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

15 (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 8, 9, 10, and 26 are rejected under 35 U.S.C. 102(b) as being
anticipated by Kristol et al.

20 In regard to claim 1, Kristol et al. disclose "a method of multicasting, comprising:
sending multicast information from a source to a plurality of targets (figure 7,
element 710 where E_{ij} indicates a plurality of targets);
sending respective acknowledgements from each of the targets, indicating
receipt of the multicast information (figure 7, element 720 where the status sent is the
25 acknowledgement as can be read in col. 10, line 42);

merging the respective acknowledgements into a merged acknowledgement
(figure 7, element 730 where the consolidated status is the merged acknowledgement);
and supplying the merged acknowledgement to the source (figure 7, element 730
where the consolidated status or acknowledgement is sent to the source).”

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In regard to claim 8, Kristol et al. disclose “the method as recited in claim 1
wherein the merged acknowledgement is formed by logically combining the respective
acknowledgements (col. 9, lines 66-67 and col. 10, line 1 where the LOB’s come from
each target and a logical bitwise AND is performed on all of them to obtain the

10 LOB_{consolidated}).”

In regard to claim 9, Kristol et al. disclose “the method as recited in claim 1
wherein the merged acknowledgement encodes the respective acknowledges to
indicate to the source which targets successfully received the multicast information (col.
9, lines 66-67 and col. 10, line 1 where the LOB’s come from each target and they are
encoded to obtain the LOB_{consolidated}).”

15

In regard to claim 10, Kristol et al. disclose “the method as recited in claim 1
wherein the merged acknowledgement indicates whether all of the targets successfully
received the multicast information, the merged acknowledgement not identifying which
of the targets successfully received or failed to successfully receive the multicast
information (col. 9, lines 66-67 and col. 10, line 1 where the LOB_{consolidated} signifies up to

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which multicast block the targets have received; col. 9, lines 55-65 where this is saying that although certain blocks may have received blocks above the lowest block received by all targets, the lowest block received will be the cutoff point for all targets, thus the source only knows that some targets did not receive the message above a certain limit

5 but it does not know which ones)."

In regard to claim 26, Kristol et al. disclose "an apparatus for transmitting information between an initiator node and a plurality of target nodes, comprising:

10 means for multicasting information to a plurality of the target nodes from the initiator node (col. 9, lines 36-37); and

means for combining received acknowledgements indicating whether the multicast information was successfully received, into a combined acknowledgement and returning the combined acknowledgement to the initiator node (col. 9, lines 43-53 and col. 10, lines 21-24)."

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

20 (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

25 Claims 2-5, 7, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristol et al. in view of Crocker et al. (U.S. Patent 5,502,756).

In regard to claim 2, Kristol et al. disclose the method as recited in claim 1. However, Kristol et al. lack "the multicast information is sent across a switch to a plurality of targets." Crocker et al. however, disclose "the multicast information is sent
5 across a switch to a plurality of targets (figure 1, element 20 where the local exchange switch of Crocker is used as the Local Exchange of Kristol)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the local exchange switch with the method of claim 1 for the purpose of routing the combined acknowledgement messages to the appropriate destination. The motivation being
10 efficient routing of information from targets to sources and vice versa.

In regard to claim 3, Kristol et al. and Crocker et al. disclose the method as recited in claim 2. However, Crocker et al. lack "the respective acknowledgements are sent from the respective targets to the switch." Kristol et al. however, further disclose
15 "the respective acknowledgements are sent from the respective targets to the switch (figure 7, element 720 where each target $E_{i,j}$ sends an acknowledgement to L_i the local exchange switch of claim 2)." It would have been obvious to one with ordinary skill in the art at the time of invention to send the target acknowledgements to the switch for the same reasons and motivation as in claim 2.

20 In regard to claim 4, Kristol et al. and Crocker et al. disclose the method as recited in claim 3. However, Crocker et al. lack "the switch merges the respective

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acknowledgements and forwards the merged acknowledgement to the source." Kristol et al. however, further disclose "the switch merges the respective acknowledgements and forwards the merged acknowledgement to the source (figure 7, element 730 where again the L_i is the local exchange switch of Crocker)." It would have been obvious to one with ordinary skill in the art at the time of invention to have the switch merge the acknowledgements into one merged acknowledgement for the same reasons and motivation as in claim 3.

In regard to claim 5, Kristol et al. and Crocker et al. disclose the method as recited in claim 4. However, Crocker et al. lack "the acknowledgements are supplied in an acknowledgement packet encoding an identity of the acknowledging target." Kristol et al. however, further disclose "the acknowledgements are supplied in an acknowledgement packet encoding an identity of the acknowledging target (figure 6, element 620 which is an acknowledgement packet as can be read in col. 9, lines 39-42 and col. 6, lines 15-20, and field LEPI where LEPI is defined as a local endpoint identifier which is used to identify a target)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the target identifier in the acknowledgement packet for the purpose of knowing who the acknowledgment message came from. The motivation being proper identification of targets that have received information.

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In regard to claim 7, Kristol et al. and Crocker et al. disclose the method as recited in claim 3. However, Crocker et al. lack "the switch is a network switch coupling a plurality of sources and a plurality of targets in a network." Kristol et al. however, further disclose "the switch is a network switch coupling a plurality of sources and a plurality of targets in a network (figure 3 where elements 302 are hosts which can be sources and targets as a host can send and receive data making it both a target and a source, and element 304 is the local exchange switch of Crocker coupling the sources and targets through network 310)." It would have been obvious to one with ordinary skill in the art at the time of invention to connect a plurality of hosts and a plurality of targets with a switch for the same reasons and motivation as in claim 3.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kristol et al. and Crocker et al. as applied to claim 3 above, and further in view of applicant's admitted prior art.

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In regard to claim 6, Kristol et al. and Crocker et al. disclose the method as recited in claim 3. However, Kristol et al. and Crocker et al. lack "the switch is a synchronous switch and all acknowledgements are received by the switch at the same time." Applicant's admitted prior art however, discloses "the switch is a synchronous switch and all acknowledgements are received by the switch at the same time (specification, page 2, lines 1-5 where this is saying that the switch is a synchronous switch and receives the acknowledgements at the same time)." It would have been

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obvious to one with ordinary skill in the art at the time of invention to include the synchronous switch with the method of claim 3 for the purpose of sending or receiving information at the same time. The motivation for this being efficiency.

5 Claims 12, 13, 21, 22, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kristol et al. in view of Crocker et al. and in further view of applicant's admitted prior art.

10 In regard to claim 12, Kristol et al. disclose "a networked system comprising:
a sending node (col. 9, line 36 where S is the source or sending node);
a plurality of receiving nodes coupled to...receive multicast information sent from the sending node during a multicast operation and coupled to provide acknowledgements indicating whether the multicast information was successfully received (col. 9, lines 36-42 where all E's are the receiving nodes and their status
15 messages are the acknowledgment messages);
a...medium coupled to supply the multicast information to the respective receiving nodes...and to receive and combine the respective acknowledgements into a combined acknowledgement supplied to the sending node (col. 9, lines 43-53 and col. 10, lines 21-24 where L is the coupled medium)." However, Kristol et al. lack
20 "...simultaneously..." sending and receiving information from the receiving and sending nodes and "a switching medium coupled to supply the multicast information..." Crocker et al. however, disclose "a switching medium coupled to supply the multicast

information... (figure 1, element 20 where the local exchange switch of Crocker is used as the Local Exchange of Kristol)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the local exchange switch with the multicast network for the purpose of routing the information to the correct destination. The

5 motivation for this being efficient data transmission.

Applicant's admitted prior art discloses "...simultaneously..." sending and receiving information from the receiving and sending nodes (specification, page 2, lines 1-5 where this is saying that the switch is a synchronous switch and receives the acknowledgements at the same time)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the simultaneous sending and receiving with the multicast network for the purpose of sending or receiving information at the same time. The motivation for this being efficiency.

In regard to claim 13, Kristol et al., Crocker et al., and applicant's admitted prior art disclose the networked system of claim 12. However, Crocker et al., and applicant's admitted prior art lack "the networked system includes a switched data network and the switching medium is a network." Kristol et al. however, further disclose "the networked system includes a switched data network and the switching medium is a network (figure 3 where elements 302 are hosts which can be sources and targets as a host can send and receive data making it both a target and a source, and element 304 is the local exchange switch of Crocker coupling the sources and targets through network 310)." It would have been obvious to one with ordinary skill in the art at the time of invention to

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include the switched data network with the network of claim 12 for the same reasons and motivation as claim 12.

In regard to claim 21, Kristol et al., Crocker et al., and applicant's admitted prior

5 art disclose the networked system of claim 12. However, Crocker et al. and applicant's admitted prior art lack "the switching medium combines the acknowledgements in response to information in each acknowledgement packet that indicates a multicast acknowledgement is being sent." Kristol et al. however, further disclose "the switching medium combines the acknowledgements in response to information in each

10 acknowledgement packet that indicates a multicast acknowledgement is being sent (figure 6, element 620 which is an acknowledgement packet as can be read in col. 9, lines 39-42 and col. 6, lines 15-20, and field LEPI where LEPI is defined as a local endpoint identifier which is used to identify a target and the Type field identifies what type of packet it is; col. 9, line 43 states that only the status type messages or

15 acknowledgement type messages are combined, these messages are identified by their Type field)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the combining acknowledgements in response to information received with the network of claim 12 for the same reasons and motivation as in claim 12.

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In regard to claim 22, Kristol et al., Crocker et al., and applicant's admitted prior art disclose the networked system of claim 12. However, Crocker et al. and applicant's

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admitted prior art lack "the acknowledgements...are destined for the same source."

Kristol et al. however, further disclose "the acknowledgements...are destined for the same source (col. 9, lines 47 where the source S is the only source therefore all acknowledgment messages are going to the same source)." It would have been obvious
5 to one with ordinary skill in the art at the time of invention to include the destined for the same source with the network of claim 12 for the same reasons and motivation as in claim 12.

In regard to claim 25, Kristol et al., Crocker et al., and applicant's admitted prior
10 art disclose the networked system of claim 12. However, Crocker et al. and applicant's admitted prior art lack "the networked system includes a plurality of hosts, each of the hosts includes both a sending node and a receiving node coupled to the switching medium." Kristol et al. however, further disclose "the networked system includes a plurality of hosts, each of the hosts includes both a sending node and a receiving node
15 coupled to the switching medium (figure 3, element 302 is a plurality of hosts, and each of these hosts is connected to the switching medium 304; further it is taken that each of these hosts must have a receiving and sending node in order to communicate with each other)." It would have been obvious to one with ordinary skill in the art at the time of invention to include the plurality of hosts with the network of claim 12 for the same
20 reasons and motivation as in claim 12.

Allowable Subject Matter

Claims 11, 14-20, 23, and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Kading whose telephone number is (703) 305-0342. The examiner can normally be reached on M-F: 8:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone number
10 for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

15 JK
November 12, 2003

Joshua Kading
Examiner
Art Unit 2661



KENNETH VANDERPUYE
PRIMARY EXAMINER